BIOL 2601 - General Biology 1: Molecules and Cells

Fall 2026 Syllabus, Section 05, CRN 42320,

Credit hours: 3

Instructor

Kimberly Hunter

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Public Instructor Information

Instructor Title: Professor
Instructor Professional Qualifications: BS in ED - Physics, YSU, 1996; MS - Educ Admin, YSU 2009; Biology Graduate Certificate, YSU - 30+ graduate semester hours (YSU, Hiram College, & PennWest University California); Comprehensive Science 7-12 professional license Ohio
Instructor Office Location: WGH rm 3215
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Course Description

2601. General Biology 1: Molecules and Cells. The chemical and physical foundations of life, structure and function of cells and organelles, metabolism, basic molecular biology and inheritance, and principles of evolution. Three hours of lecture per week. Coreq.: BIOL 2601L. Prereq. or Coreq.: CHEM 1515. 3 s.h.

Course Readings

Group	Title	Author	ISBN
Required	Campbell Biology 9th Edition for AP		

Additional required readings from the Open Stax Biology 2nd edition.

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Week of	Reading(s)	Proposed Topic	Due/To Prepare for Class
8/24	Ch 51 (Campbell)	Animal Behavior	Complete reading guide
8/31	Ch 2 - 2.2&2.3 Water & Carbon (OpenStax)	Chemical basis of life; bonding and properties of water	Animal Behavior Lab, Water Lab, Stats notes, reading guides
9/7	Ch 3 - biological macromolecules (OS)	macromolecules, bonding	notes, reading guides, labs Quiz ch 2-3
9/14	ch 4 Cell structure (OS)	microscopes, cell theory, cell types, cellular organelles, cell connections	notes, reading guides, microscope lab
9/21	ch 5 (OS)	plasma membrane structure and function	notes, reading guides, pogil, lab Unit exam ch 2-5 week of 9/28
9/28	ch 6/7 metabolisms & cell respiration (OS)	ATP, enzymes, Cell respiration - stages & pathways	notes, reading guides, POGILs, lab
10/5	ch 8 photosynthesis	overview, stages, pathways	notes, reading guides, POGILs, lab quiz ch 6-8 w/o 10/12
10/12	ch 9 cell communication	types, general pathways, mechanisms	notes, reading guides, POGILs, lab, project - affects of drug/disease on signalling pathways
10/19	ch 9 cell communication project	details forthcoming	project due
10/26	ch 10 Cell Reproduction	Mitosis, Cell Cycle control, Cancer	notes, reading guides, POGILs, lab

11/2	ch 11 Meiosis & Sexual Reproduction		notes, reading guides, case study, lab Quiz ch 10-11 w/o 11/19RNA
11/9	ch 12-13 Heredity	mendelian, non-mendelian genetic mechanisms	notes, reading guides, POGILs, lab, practice problems
11/16	ch 14 DNA Structure & Function	historical basis, structure, replication, pro v euk replication, repair	notes, reading guides, POGILs, lab
11/23	ch 15 Protein Synthesis, Gene regulation	RNA, Transcription, translation, gene regulation in pro.	notes, reading guides, POGILs, lab UNit exam w/o 11/30 over ch 12-15
11/30	Ch 18-20 Evolution, Populations, Phylogeny	Evidence of Evolution, Mechanisms of Evolution, Speciation, Hardy-Weinberg Equilibrium, Reproductive isolation	notes, reading guides, POGILs, lab quiz over 18-20 w/o 12/7, final exam last day of semester per WGH/WCS calendar. virus/bacteria project due finals week
12/7	Ch 18-20 Evol, Pop, Phylo		

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.